

REMARKS

Claims 1-5, 8, 18, 21, 22, and 24-26 are pending, with claims 1 and 18 being independent. Claim 23 has been canceled. Claim 18 has been amended to remove the product-by-process limitation and to place the claim in better condition for appeal. In particular, entry of the amendment to claim 18 is proper under 37 CFR §1.116 and MPEP §714.12 because the foregoing amendment places the application in better condition for appeal, because the amendment includes the cancellation of a rejected claim (claim 23), and an amendment relating to form (namely to remove the product by process language in claim 18). Thus, the foregoing amendment does not present any new issue requiring further consideration or search in view of the Examiner's familiarity with this application.

Rejection of claims 1, 3, 4, and 8 in view of Kumbera

Claims 1, 3, 4, and 8 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,168,414 to Kumbera et al. (Kumbera). Applicant requests withdrawal of this rejection because Kumbera does not describe or suggest a tube provided within a seal that is provided around a vacuum interrupter and a current exchange housing, where the tube is disposed such that a first end of the tube accesses a cavity defined within the current exchange housing and a second end of the tube accesses an exterior of the seal, as recited in claim 1.

The Examiner points to the tube 47 and the bushing 51 (presumably, the Examiner meant to refer to the wall 23 instead of the bushing 51) in Figure 3 of Kumbera as somehow showing a tube provided within a seal. However, while the tube 47 in Figure 3 of Kumbera is disposed in the wall 23, the tube 47 is not disposed in a seal such that a second end of the tube 47 accesses an exterior of a seal. To the contrary, any air within the tube 47 is free to flow from an interior of the wall 23 to an exterior of the wall 23, beyond the sidewall 53 and into the operating unit 4.

Apparently paraphrasing claim 1 and applicant's argument, the Examiner states "[a]pplicant argues that Kumbera fails to teach a second end of the tube open to encapsulation material." However, applicant never argues and claim 1 does not require that a second end of the

tube opens to an encapsulation material. To clarify, claim 1 requires that a "second end of the tube accesses an exterior of the seal." In Kumbera, while the second end of the tube 47 accesses an exterior to the wall 23, the second end of the tube 47 does not access an exterior of a seal, because, as discussed above, the wall 23 does not provide a seal at the interface between the operating unit 4 and the tube 47.

For at least the above reasons, claim 1 is allowable over Kumbera. Claims 3, 4, and 8 depend from claim 1 and are allowable for at least the reasons that claim 1 is allowable and for containing allowable subject matter in their own right. For example, claim 3 recites that "the tube is integrally formed into the seal during formation of the seal." In Kumbera, the tube 47 is not integrally formed into the seal formed by the wall 23, the housing 54, and the O-ring seal 59. Rather, the tube 47 is formed entirely within the interior of the interrupter 3 and the unit 4, as discussed above.

As another example, claim 4 recites that the "second end of the tube is open to an encapsulation material provided around the vacuum interrupter, the current exchange housing, and the seal." Kumbera does not disclose such a tube. In Kumbera, the vacuum interrupter 3 is cast and encapsulated within the wall 23. See Kumbera at col. 5, lines 58-63. However, no end of the guide tube 47 is open to the wall 23. Rather, the guide tube 47 opens at one end to the conductive housing 42 and at another end to an interior of the unit 4. See Kumbera at Figs. 3 and 4.

Rejection of claims 1-4 and 8 in view of Pflanz

Claims 1-4 and 8 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 3,849,617 to Pflanz (Pflanz). Applicant requests withdrawal of this rejection because Pflanz does not describe or suggest a current exchange housing adjacent to a vacuum interrupter, as recited in claim 1.

The Examiner points to elements 46 and 47 of Pflanz as somehow showing a current exchange housing adjacent to the vacuum interrupter 10. However, the elements 46 and 47 are integral components of the vacuum interrupter 10. See Pflanz at col. 2, line 66 to col. 3, line 1.

The elements 46 and 47 cannot be both components of the vacuum interrupter 10 and parts of a current exchange housing that is adjacent to the vacuum interrupter 10.

Claims 2-4 and 8 depend from claim 1 and are allowable for at least the reasons that claim 1 is allowable and for containing allowable subject matter in their own right. Claim 4 recites that the "second end of the tube is open to an encapsulation material provided around the vacuum interrupter, the current exchange housing, and the seal." Pflanz does not disclose the use of such an encapsulation material. Thus, no end of Pflanz's tube 24 opens to such an encapsulation material.

Rejection of claims 5, 18, 21, 22, and 24-26 in view of Pflanz

Claims 5, 18, 21, 22, and 24-26 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Pflanz. Applicant requests withdrawal of this rejection for the following reasons.

Claim 5 depends from claim 1 and is allowable for at least the reasons that claim 1 is allowable. As discussed above, Pflanz does not properly disclose or suggest all of the features recited in claim 1. Specifically, Pflanz does not disclose a current exchange housing adjacent to the vacuum interrupter or a seal provided around the vacuum interrupter and a current exchange housing. Further, there is nothing in the cited references that would have motivated one of ordinary skill in the art to modify Pflanz to produce the subject matter of claim 1.

Pflanz also does not describe or suggest all of the features of claim 18. In particular, as discussed above with respect to claim 1, Pflanz does not disclose a housing adjacent to a vacuum interrupter and a seal around the vacuum interrupter and the housing. Rather, Pflanz discloses only the vacuum interrupter 10. See Pflanz at col. 2, lines 37-40 and Fig. 1.

Furthermore, there is nothing in the cited references that would have motivated one of ordinary skill in the art to modify Pflanz to include a hollow housing adjacent to the vacuum interrupter 10 and a seal around the vacuum interrupter and the hollow housing to define an air-filled cavity within the hollow housing. Pflanz discloses an evacuated space 23 within the vacuum interrupter 10, which is evacuated by tube 24 and sealed by end caps 17 and 18. See

Pflanz at col. 2, lines 40-41 and 54-59. However, the space 23 is not a hollow housing adjacent to the vacuum interrupter 10. Rather, the space 23 is within the vacuum interrupter 10. Additionally, while the tube 24 is formed into wall member 11, the tube 24 is not formed into a seal that is provided around the interrupter 10 and an adjacent hollow housing. For at least these reasons, claim 18 is allowable over Pflanz.

Claims 21, 22, and 24-26 depend from claim 18 and are allowable for at least the reasons that claim 18 is allowable and for containing allowable subject matter in their own right. For example, claim 21 recites a tube with a diameter large enough to transfer air from the air-filled cavity to the space exterior the seal and small enough to prevent transmission of the liquefied encapsulation material from the space into the air-filled cavity. Pflanz never suggests that the tube 24 has a diameter small enough to prevent transmission of a liquefied encapsulation material. Rather, Pflanz explains that the tube 24 is actively sealed after the space 23 is "evacuated to the extent desired." See Pflanz at col. 2, lines 60-66.

As another example, claim 24 recites that "the second end of the tube is open to an encapsulation material provided around the vacuum interrupter, the hollow housing, and the seal." However, Pflanz does not disclose a tube that is open to an encapsulation material provided around the interrupter 10.

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Serial No. : 10/802,409
Filed : March 16, 2004
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Attorney's Docket No.: 08215-540001 / P03-026853

It is believed that no fee is due with this filing. Nevertheless, please apply any charges or credits to deposit account 06-1050.

Respectfully submitted,

Date: September 2, 2005

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